

Detailed Action

This Action is responsive to the Amendments received on 2/26/2008.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Douglas Holtz on Aug 7th, 2008.

The authorized amendments are stated below:

(1) In claim 9, line 15 change the following wording:

"the spread code, the 2 chip-times" to

--- the spread code, and said 2 chip-times ---

(2) In claim 12, line 21 change the following wording:

"chip-times of the spread code, the 2 chip-times" to

--- chip-times of the spread code, and said 2 chip-times ---

Allowable Subject Matter

The following is a statement of reasons for the indication of allowable subject matter: The present invention is a device for spread spectrum communication

comprising: a toggle detecting unit which detects a candidate of a toggle point existing in a carrier of a received signal by calculating correlation between the carrier of the received signal and a pre-held expected signal and then searching for positions of phase changing points expected to be in the received signal but whose positions are currently unknown, wherein the received signal is a modulated waveform of the carrier wave itself, and wherein the pre-held expected signal is a signal including a waveform of the toggle point which is expected to be in the carrier of the received signal and is a signal having a length corresponding to 2 chip-times of a spread code or is a signal having a shorter length than 2 chip-times of the spread code, and said 2 chip-times of the spread code being that portion of the expected signal extending from both sides of the toggle point a distance of 1 chip-time; and a demodulating unit which demodulates the received signal by multiplying the received signal by the spread code which is shifted according to a shift amount calculated based on the detected candidate

The closest Prior Art is Sato (US 2001/0036221) shows a similar system which detects a candidate of a toggle point existing in a carrier of a received signal by calculating correlation between the carrier of the received signal and a pre-held expected signal and then searching for positions of phase changing points expected to be in the received signal but whose positions are currently unknown; and said received signal is then demodulated by the spread code which is shifted based on detected candidate. However Sato fails to teach the received signal is a modulated waveform of the carrier wave itself, wherein the pre-held expected signal is a signal including a waveform of the toggle point which is expected to be in the carrier of the received signal

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and is a signal having a length corresponding to 2 chip-times of a spread code or is a signal having a shorter length than 2 chip-times of the spread code, and said 2 chip-times of the spread code being that portion of the expected signal extending from both sides of the toggle point a distance of 1 chip-time. The distinct feature have been added to the independent claims 9 and 12, therefore rendering them allowable.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES M. PEREZ whose telephone number is (571)270-3231. The examiner can normally be reached on Monday through Friday: 9am to 5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on 571-272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/James M Perez/

Examiner, Art Unit 2611

8/18/2008

/Shuwang Liu/

Supervisory Patent Examiner, Art Unit 2611